Set Name side by side	Query	Hit Count	Set Name result set
	DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
L8	(antibod$ or hybridoma$ or immunoglobulin$)same(cd40) same (186$ or 2996 or 2997 or 2998 or 2993 or 2999 or 2994 or 2995)	105	L8
	DB=USPT; PLUR=YES; OP=ADJ		
L7	L3 and (antibod$ or hybridoma$ or immunoglobulin$)same(4 or 7 or 15 or 21 or 26 or 64 or 70)same (clone$ or hybridoma$)same (cd40)	19	L7
L6	L5	46	L6
	DB=PGPB,USPT,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
L5	L3 and (antibod$ or hybridoma$ or immunoglobulin$)same(4 or 7 or 15 or 21 or 26 or 64 or 70)same (clone$ or hybridoma$)	154	L5
L4	L3 and (antibod$ or hybridoma$ or immunoglobulin$)same(4 or 7 or 15 or 21 or 26 or 64 or 70)	264	L4
L3	(l1 or L2) and cd40	315	L3
L2	de boer.in.	1159	L2
L1	thomas.in.	280181	L1

END OF SEARCH HISTORY

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     $0.02  TELNET
     $0.02  Estimated cost this search
     $0.43  Estimated total session cost   0.218 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File   5:Biosis Previews(R) 1969-2006/Aug W2
         (c) 2006 The Thomson Corporation
  File  73:EMBASE 1974-2006/Aug 18
         (c) 2006 Elsevier B.V.
  File 155:MEDLINE(R) 1950-2006/Aug 21
         (c) format only 2006 Dialog
  File 399:CA SEARCH(R) 1967-2006/UD=14508
         (c) 2006 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
IPCR/8 classification codes now searchable as IC=. See HELP NEWSIPCR.

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E3        1  AU=THOMAS DAVE CRAWSHAW
E4        1  AU=THOMAS DAVE Y
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E7      105  AU=THOMAS DAVID B
E8        4  AU=THOMAS DAVID B L
E9        3  AU=THOMAS DAVID BRYNMOR
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E15      35  AU=THOMAS DAVID G T
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E17       1  AU=THOMAS DAVID GT
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 3/3/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0012485486   BIOSIS NO.: 200000203799
Readministration of adenovirus vector in nonhuman primate lungs by blockade
  of CD40-CD40 ligand interactions
AUTHOR: Chirmule Narendra; Raper Steven E; Burkly Linda; Thomas David
  ; Tazelaar John; Hughes Joseph V; Wilson James M (Reprint)
AUTHOR ADDRESS: University of Pennsylvania, 3601 Spruce St., 204 Wistar
  Institute, Philadelphia, PA, 19104, USA**USA
JOURNAL: Journal of Virology  74 (7): p3345-3352 April, 2000 2000
MEDIUM: print
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English


 3/3/2     (Item 2 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0012365442   BIOSIS NO.: 200000083755
Prolongation of primate cardiac allograft survival by treatment with anti-
  CD40 ligand (CD154) antibody
AUTHOR: Pierson Richard N III (Reprint); Chang Andrew C; Blum Matthew G;
  Blair Kelly S A; Scott Margie A; Atkinson James B; Collins Brendan J;
  Zhang Jian-Ping; Thomas David W; Burkly Linda C; Miller Geraldine G
AUTHOR ADDRESS: Division of Cardiac and Thoracic Surgery, Vanderbilt
  University Medical Center, 2986 Vanderbilt Clinic, Nashville, TN,
  37232-5734, USA**USA
JOURNAL: Transplantation (Baltimore)  68 (11): p1800-1805 Dec. 15, 1999
1999
MEDIUM: print
ISSN: 0041-1337
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English


 3/3/3     (Item 3 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0012073843   BIOSIS NO.: 199900333503
An aggressive form of polyarticular arthritis in a man with CD154 mutation
  (X-linked hyper-IgM syndrome)
AUTHOR: Webster Elizabeth A; Khakoo Aarif Y; Mackus Wendeline JM; Karpusas
  Michael; Thomas David W; Davidson Anne; Christian Charles L;
  Lederman Seth (Reprint)
AUTHOR ADDRESS: Laboratory of Molecular Immunology, Columbia University,
  630 West 168th Street, PH8-405, New York, NY, 10032, USA**USA
JOURNAL: Arthritis and Rheumatism  42 (6): p1291-1296 June, 1999 1999
MEDIUM: print
ISSN: 0004-3591
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DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

3/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011644519 BIOSIS NO.: 199800438766
Pharmacokinetics/dynamics of 5c8, a monoclonal antibody to CD154 (CD40 ligand) suppression of an immune response in monkeys
AUTHOR: Gobburu Jogarao V S; Tenhoor Christopher; Rogge Mark C; Frazier Donald E Jr; Thomas David; Benjamin Chris; Hess Donna M; Jusko William J (Reprint)
AUTHOR ADDRESS: 545 Hochstetter Hall, Dep. Pharm., SUNY, Buffalo, NY 14260, USA**USA
JOURNAL: Journal of Pharmacology and Experimental Therapeutics 286 (2): p 925-930 Aug., 1998 1998
MEDIUM: print
ISSN: 0022-3565
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

3/3/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011478002 BIOSIS NO.: 199800272249
The role of polar interactions in the molecular recognition of CD40L with its receptor CD40
AUTHOR: Singh Juswinder (Reprint); Garber Ellen; Van Vlijmen Herman; Karpusas Michael; Hsu Yen-Ming; Zheng Zhongli; Naismith James H; Thomas David
AUTHOR ADDRESS: Biogen Inc., 14 Cambridge Center, Cambridge, MA 02142, USA **USA
JOURNAL: Protein Science 7 (5): p1124-1135 May, 1998 1998
MEDIUM: print
ISSN: 0961-8368
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

3/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011407434 BIOSIS NO.: 199800201681
Effect of anti-CD40L antibody on the host response to Streptococcus pneumoniae
AUTHOR: Hwang Young-Il (Reprint); Briles David E; Thomas David W; Nahm Moon H
AUTHOR ADDRESS: Univ. Rochester, Rochester, NY 14642, USA**USA
JOURNAL: FASEB Journal 12 (4): pA570 March 17, 1998 1998
MEDIUM: print
CONFERENCE/MEETING: Annual Meeting of the Professional Research Scientists on Experimental Biology 98, Part 1 San Francisco, California, USA April 18-22, 1998; 19980418
SPONSOR: Federation of American Societies for Experimental Biology
ISSN: 0892-6638
DOCUMENT TYPE: Meeting; Meeting Abstract

RECORD TYPE: Citation
LANGUAGE: English

3/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011077861 BIOSIS NO.: 199799711921
CTLA4-Ig and anti-CD40 ligand prevent renal allograft rejection in primates
AUTHOR: Kirk Allan D (Reprint); Harlan David M; Armstrong Nicholas N; Davis Thomas A; Dong Yinchen; Gray Gary S; Hong Xuening; Thomas David; Fechner John H Jr; Knechtle Stuart J
AUTHOR ADDRESS: Division Transplantation, Univ. Wisconsin Hosp., Madison, WI 53792, USA**USA
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 94 (16): p8789-8794 1997 1997
ISSN: 0027-8424
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

3/3/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010808812 BIOSIS NO.: 199799442872
CD40-CD40L interactions are critical in immune responses of both cell-mediated and humoral immune responses to adenoviral vectors in non-human primates
AUTHOR: Chirmule Narendra (Reprint); Raper Stevens E (Reprint); Hess Donna; Thomas David W; Wilson James M (Reprint)
AUTHOR ADDRESS: Univ. Pa., Philadelphia, PA, USA**USA
JOURNAL: Journal of Allergy and Clinical Immunology 99 (1 PART 2): pS36 1997 1997
CONFERENCE/MEETING: Joint Meeting of the American Academy of Allergy, Asthma and Immunology, the American Association of Immunologists and the Clinical Immunology Society San Francisco, California, USA February 21-26, 1997; 19970221
ISSN: 0091-6749
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

3/3/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0010725643 BIOSIS NO.: 199799359703
Heteromultimeric complexes of CD40 ligand are present on the cell surface of human T lymphocytes
AUTHOR: Hsu Yen-Ming (Reprint); Lucci Jodie; Su Lihe; Ehrenfels Barbara; Garber Ellen; Thomas David
AUTHOR ADDRESS: Dep. Protein Eng., Biogen Inc., 14 Cambridge Center, Cambridge, MA 02142, USA**USA
JOURNAL: Journal of Biological Chemistry 272 (2): p911-915 1997 1997
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

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 3/3/10     (Item 10 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0010439743   BIOSIS NO.: 199699073803
Crystallographic studies of human CD40 ligand
AUTHOR: Karpusas Michael (Reprint); Hsu Yen-Ming (Reprint); Wang Jia-Huai;
  Garber Ellen (Reprint); Strauch Kathy (Reprint); Thompson Jeff (Reprint);
  Mullen Colleen (Reprint); Lederman Seth; Ches Leonard; Thomas David
  (Reprint)
AUTHOR ADDRESS: Biogen, Inc., 12 Cambridge Cent., Cambridge, MA 02142, USA
  **USA
JOURNAL: European Cytokine Network  7 (2): p170 1996 1996
CONFERENCE/MEETING: 6th International Tumor Necrosis Factor Congress
Rhodes, Greece  May 8-12, 1996; 19960508
ISSN: 1148-5493
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English


 3/3/11     (Item 11 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2006 The Thomson Corporation. All rts. reserv.

0010090526   BIOSIS NO.: 199698558359
2 A crystal structure of an extracellular fragment of human CD40 ligand
AUTHOR: Karpusas Michael (Reprint); Hsu Yen-Ming; Wang Jia-Huai; Thompson
  Jeff; Lederman Seth; Chess Leonard; Thomas David
AUTHOR ADDRESS: Biogen Inc., 12 Cambridge Center, Cambridge, MA 02142, USA
  **USA
JOURNAL: Structure (London)  3 (10): p1031-1039 1995 1995
ISSN: 0969-2126
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
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First Hit Fwd Refs

L2: Entry 51 of 56 File: USPT Oct 6, 1998

DOCUMENT-IDENTIFIER: US 5817308 A
** See image for Certificate of Correction **
TITLE: Tolerogenic fusion proteins of immunoglobulins and methods for inducing and maintaining tolerance

Detailed Description Text (44):
A tolerogenic amount of a fusion immunoglobulin also depends on the size of the animal and is typically about 10 to 100-fold higher (for B-cell tolerance) than the amount of the antigen and/or epitope given to the animal to elicit a protective immune response, except in the case of low dose tolerance. A tolerogenic amount of an antigen per unit of mass is typically about 1 to 40 mg/kg of body weight to induce high dose tolerance for an epitope or antigen administered as a single dose intravenously to an animal. Low dose tolerance is also observed in some cases and can be obtained after multiple (>4) doses of submicrogram quantities in saline at weekly intervals intraperitoneally or intravenously.

Other Reference Publication (15):
Lanza et al., "Use of Antigenized Antibodies Containing CD4 Sequences to Generate Antibodies Able to Inhibit Syncytia Formation," FASEB Journal, 6, A1400, Abstract No. 2690 (1992).

First Hit

L8: Entry 23 of 105 File: PGPB Jun 24, 2004

DOCUMENT-IDENTIFIER: US 20040120948 A1
TITLE: Anti-CD40 monoclonal antibody

Summary of Invention Paragraph:
[0008] The activation of B cells is known as an action of agonistic antibodies. For example, anti-CD40 antibodies have been reported to induce cell adhesion (Barrett et al., J. Immunol. 146: 1722, 1991; Gordon et al., J. Immunol. 140: 1425, 1988), enhance cell size (Gordon et al., J. Immunol. 140: 1425, 1988; Valle et al., Eur. J. Immunol. 19: 1463, 1989), induce the division of B cells that are activated only with anti-IgM antibodies, anti-CD20 antibodies or phorbol ester (Clark and Ledbetter, Proc. Natl. Acad. Sci. USA 83: 4494, 1986; Gordon et al., LEUCOCYTE TYPING III. A. J. McMicheal ed. Oxford University Press. Oxford, p. 426; Paulie et al., J. Immunol. 142: 590, 1989), induce the division of B cells in the presence of IL4 (Valle et al., Eur. J. Immunol. 19: 1463, 1989; Gordon et al., Eur. J. Immunol. 17: 1535, 1987), induce the expression of IgE (Jabara et al., J. Exp. Med. 172: 1861, 1990; Gascan et al., J. Immunol. 147: 8, 1991), IgG and IgM (Gascan et al., J. Immunol. 147: 8, 1991) of cells stimulated with IL-4 and cultured without T cells, enhance the secretion and the on-the-cell expression (Challa A, Allergy, 54: 576, 1999) of soluble CD23/Fc.epsilon. RII from B cells by IL-4 (Gordon and Guy, Immunol. Today 8: 339, 1987; Cairns et al., Eur. J. Immunol. 18: 349, 1988), and promote IL-6 production (Clark and Shu, J. Immunol. 145: 1400, 1990). Furthermore, it has been reported that B cell clones are established from human primary culture B cells by adding IL-4 and anti-CD40 antibodies in the presence of CDw32+ adhesion cells (Bancherau et al., Science 241:70, 1991), and the inhibition of the apoptosis of germinal center cells is mediated by CD40, regardless of the function of antigen receptors (Liu et al., Nature 342: 929, 1989). As described above, CD40 has been identified as an antigen expressed on the human B cell surface. Thus, most of the isolated antibodies have been evaluated mainly using function to induce the proliferation and differentiation of human B cells and activity to induce cell death in cancer cells as indicators (Katira, A. et. al., LEUKOCYTE TYPING V. S. F. Schlossossman, et al. eds. p. 547. Oxford University Press. Oxford, W. C. Flansow et al., LEUKOCYTE TYPING V. S. F. Schlossossman, et al. eds. p. 555. Oxford University Press. Oxford, J. D. Pound et al., International Immunology, 11: 11, 1999).

First Hit

L8: Entry 30 of 105 File: PGPB Nov 13, 2003

DOCUMENT-IDENTIFIER: US 20030211100 A1
TITLE: Antibodies to CD40

Summary of Invention Paragraph:
[0009] Several groups have demonstrated the effectiveness of CD40 activation for antitumor responses in vitro and in vivo. (Toes R. E. M. et al., Seminars in Immunol. 10:443-8 (1998).) Two groups, using lung metastatic model of renal cell carcinoma and subcutaneous tumors by virally transformed cells, have independently demonstrated that CD40 activation can reverse tolerance to tumor-specific antigens, resulting in efficient antitumor priming of T cells. (Sotomayor E. M. et al., Nature Medicine 5:780-787 (1999); Diehl L. et al., Nature Medicine 5:774-9 (1999).) Antitumor activity in the absence of immune cells was also reported by CD40L and anti-CD40 antibody treatment in a human breast cancer line model in SCID mice. (Hirano A. et al., Blood 93:2999-3007 (1999).) CD40 activation by anti-CD40 antibody was recently shown to eradicate CD40+ and CD40- lymphoma in mouse models. (French R. R. et al., Nature Medicine 5:548-53 (1999).) Furthermore, previous studies by Glennie and co-workers conclude that signaling activity by anti-CD40 antibodies is more effective for inducing in vivo tumor clearance than other anti-surface marker antibodies capable of recruiting effectors. (Tutt A. L. et al., J. of Immunol. 161:3176-85 (1998).) Consistent with these observations, when anti-CD40 antibodies were tested for activity against CD40+ tumor cells in vivo, most but not all of the tumoricidal activity was associated with CD40 signaling rather than ADCC. (Funakoshi S. et al., J. of Immunotherapy with Emphasis on Tumor Immunol. 19:93-101 (1996).) In another study, bone marrow dendritic cells were treated ex vivo with a variety of agents, and tested for in vivo antitumor activity. These studies demonstrated that CD40L stimulated DCs were the most mature and most effective cells that mounting an antitumor response.

Detail Description Paragraph:
[0203] Recombinant anti-CD40 human antibodies of the invention can be isolated by screening a recombinant combinatorial antibody library. Preferably the library is a scFv phage display library, generated using human V.sub.L and V.sub.H cDNAs prepared from mRNA isolated from B cells. Methodologies for preparing and screening such libraries are known in the art. There are commercially available kits for generating phage display libraries (e.g., the Pharmacia Recombinant Phage Antibody System, catalog no. 27-9400-01; and the Stratagene SurfZAP.TM. phage display kit, catalog no. 240612). There also are other methods and reagents that can be used in generating and screening antibody display libraries (see, e.g., U.S. Pat. No. 5,223,409; PCT Publication Nos. WO 92/18619, WO 91/17271, WO 92/20791, WO 92/15679, WO 93/01288, WO 92/01047, WO 92/09690; Fuchs et al., Bio/Technology 9:1370-1372 (1991); Hay et al., Hum. Antibod. Hybridomas 3:81-85 (1992); Huse et al., Science 246:1275-1281 (1989); McCafferty et al., Nature 348:552-554 (1990); Griffiths et al., EMBO J. 12:725-734 (1993); Hawkins et al., J. Mol. Biol. 226:889-896 (1992); Clackson et al., Nature 352:624-628 (1991); Gram et al., Proc. Natl. Acad. Sci. USA 89:3576-3580 (1992); Garrad et al., Bio/Technology 9:1373-1377 (1991); Hoogenboom et al., Nuc. Acid Res. 19:4133-4137 (1991); and Barbas et al., Proc. Natl. Acad. Sci. USA 88:7978-7982 (1991).

First Hit Fwd Refs

L8: Entry 62 of 105 File: USPT May 31, 2005

DOCUMENT-IDENTIFIER: US 6899879 B2
TITLE: Method for treating an IgE-mediated disease in a patient using anti-CD40 monoclonal antibodies

Other Reference Publication (26):
Jabara, et al., CD40 and IgE: Synergism between Anti-CD40 Monoclonal Antibody and Interleukin 4 in the Induction of IgE Synthesis by Highly Purified Human B Cells, J. Exp. Med. 172:1861-1864 (Dec. 1990).

First Hit Fwd Refs

L8: Entry 84 of 105 File: USPT Nov 6, 2001

DOCUMENT-IDENTIFIER: US 6312693 B1
TITLE: Antibodies against human CD40

Brief Summary Text (5):
CD40 is a potent signaling receptor, providing a mechanism for activated T-cells to regulate a wide range of immune and inflammatory responses. In vitro and in vivo studies with recombinant forms of the gp39 ligand and with anti-CD40 mAbs have shown that signaling through this receptor leads to a cellular response in all known CD40.sup.+ cells, and that outcome not only varies by cell type but is also modulated by concurrent signaling events through other receptors. In B cells, for example, CD40 signaling in conjunction with signaling by the IL-4 receptor leads to B cell proliferation and production of antibodies of the IgE isotype, while CD40 signaling in conjunction with signals from the IL-10 receptor lead to B cell proliferation and production of antibodies of the IgG isotype (Gordon et al., Eur. J. Inmunol. (1987) 17:1535-38; Rousset et al., J. Exp. Med. (1991) 173:705-710; Jabara et al., J. Exp. Med. (1990) 172:1861-64; Gascan et al., J. Immunol. (1991) 147:8-13). Gp39 mediated CD40 signaling may play a role in cellular immunity through the induction of CD80 and CD86, important T cell costimulatory molecules which bind CD28 and CTLA4 (Goldstein et al., Mol. Immunol. (1996) 33:541-52).

First Hit Fwd Refs

L8: Entry 100 of 105 File: USPT Feb 23, 1999

US-PAT-NO: 5874082
DOCUMENT-IDENTIFIER: US 5874082 A
** See image for Certificate of Correction **

TITLE: Humanized anti-CD40 monoclonal antibodies and fragments capable of blocking B cell proliferation

DATE-ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
de Boer; Mark	Heemskerk			NL

US-CL-CURRENT: 424/153.1; 424/130.1, 424/133.1, 424/141.1, 424/143.1, 424/144.1, 424/173.1, 530/387.3, 530/388.22, 530/388.7, 530/388.73

CLAIMS:

We claim:

1. A humanized monoclonal antibody which binds to a human CD40 antigen located on the surface of a normal human B cell, said monoclonal antibody being free of significant agonistic activity, wherein the binding of the antibody to the CD40 antigen inhibits the growth or differentiation of said normal human B cell.

2. The humanized monoclonal antibody of claim 1 selected from the group consisting of humanized 5D12, 3A8 3C6 and a humanized antigen-specific binding fragment thereof, wherein monoclonal antibodies 5D 12, 3A8 and 3C6 are secreted by hybridomas having ATCC Accession Nos. HB 11339, HB 12024 and HB 11340, respectively.

3. The humanized monoclonal antibody of claim 2 which is humanized 5D12 or a humanized antigen-specific binding fragment thereof.

4. The humanized monoclonal antibody of claim 2 which is humanized 3A8 or a humanized antigen-specific binding fragment thereof.

5. The humanized monoclonal antibody of claim 2 which is humanized 3C6 or a humanized antigen-specific binding fragment thereof.

6. A composition comprising:

(i) a humanized monoclonal antibody which binds to a human CD40 antigen located on the surface of a normal human B cell, said monoclonal antibody being free of significant agonistic activity, and wherein the binding of the antibody to the CD40 antigen inhibits the growth or differentiation of said normal human B cell; and

(ii) an acceptable excipient.

7. The composition of claim 6, wherein the humanized monoclonal antibody is selected from the group consisting of humanized 5D12, 3A8, 3C6 and a humanized antigen-specific binding fragment thereof, wherein monoclonal antibodies 5D12, 3A8 and 3C6 are secreted by hybridomas having ATCC Accession Nos. HB11339, HB 12024 and HB 11340, respectively.

8. The composition of claim 7, wherein the humanized monoclonal antibody is humanized 5D12 or a humanized antigen-specific binding fragment thereof.

9. The composition of claim 7, wherein the humanized monoclonal antibody is humanized 3A8 or a humanized antigen-specific binding fragment thereof.

10. The composition of claim 7, wherein the humanized monoclonal antibody is humanized 3C6 or a humanized antigen-specific binding fragment thereof.

11. A pharmaceutical composition comprising:

(i) a humanized monoclonal antibody which binds to a human CD40 antigen located on the surface of a normal human B cell, said monoclonal antibody being free of significant agonistic activity, wherein the binding of the antibody to the CD40 antigen inhibits the growth or differentiation of said normal human B cell; and

(ii) a pharmaceutically acceptable excipient.

12. The pharmaceutical composition of claim 11, wherein the humanized monoclonal antibody is selected from the group consisting of humanized 5D12, 3A8, 3C6 and a humanized antigen-specific binding fragment thereof, and wherein monoclonal antibodies 5D12, 3A8 and 3C6 are secreted by hybridornas having ATCC Accession Nos. HB11339, HB 12024 and HR 11340, respectively.

13. The pharmaceutical composition of claim 12, wherein the humanized monoclonal antibody is humanized 5D12 or a humanized antigen-specific binding fragment thereof.

14. The pharmaceutical composition of claim 12, wherein the humanized monoclonal antibody is humanized 3A8 or a humanized antigen-specific binding fragment thereof.

15. The pharmaceutical composition of claim 12, wherein the humanized monoclonal antibody is humanized 3C6 or a humanized antigen-specific binding fragment thereof.

16. A method for treating systemic lupus erythematosus in a patient, the method comprising administering to a patient in need of such treatment a composition comprising:

(i) a therapeutically effective amount of a humanized monoclonal antibody which binds to a human CD40 antigen located on the surface of a normal human B cell, said monoclonal antibody being free of significant agonistic activity, wherein the binding of the antibody to the CD40 antigen inhibits the growth or differentiation of said normal human B cell; and

(ii) a pharmaceutically acceptable excipient.

17. The method of claim 16 wherein the monoclonal antibody is selected from the group consisting of humanized 5D12, 3A8, 3C6 and a humanized antigen-specific binding fragment thereof, wherein monoclonal antibodies 5D12, 3A8 and 3C6 are secreted by hybridomas having ATCC Accession Nos. HB 11339, HB 12024 and HB 11340, respectively.

18. The method of claim 17 wherein the monoclonal antibody is humanized 5D12 or a humanized antigen-specific binding fragment thereof.

19. The method of claim 17 wherein the monoclonal antibody is humanized 3A8 or a humanized antigen-specific binding fragment thereof.

20. The method of claim 17 wherein the monoclonal antibody is humanized 3C6 or a humanized antigen-specific binding fragment thereof.

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CLAIMS:

We claim:

1. A murine monoclonal antibody selected from the group consisting of HuCD40-M2 (ATCC HB 11459) and monoclonal antibodies that bind the same epitope bound by HuCD40-M2.

2. A murine monoclonal antibody produced by the murine hybridoma HuCD40-M2 (ATCC HB 11459).

3. A human monoclonal antibody according to claim 1.

4. A binding protein comprising a CD40-binding domain of an antibody according to claim 1, selected from the group consisting of a humanized monoclonal antibody, a single-chain Fv fragment, and a bivalent Fv fragment.

5. A humanized monoclonal antibody according to claim 4.

6. A CD40-binding domain of an antibody according to claim 2, selected from the group consisting of a humanized monoclonal antibody, a single-chain Fv fragment, and a bivalent Fv fragment.